

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A translucent ceramic ~~principally containing a composition according to claim 12~~ represented by the formula $\text{Ba}(\text{Ti}_{x1}\text{M}_{x2}(\text{Mg}_{1-t}\text{Zn}_t)_y(\text{Ta}_{1-u}\text{Nb}_u)_z)_v\text{O}_w$, wherein ~~M is at least one selected from the group consisting of Sn, Zr, and Hf~~; ~~w is a positive number for maintaining the electrical neutrality; $x1 + x2 + y + z = 1$; $0.015 \leq x1 + x2 \leq 0.90$; $0 < x1 \leq 0.90$; and $0 \leq x2 \leq 0.60$; $1.60 \leq z/y \leq 2.40$; $1.00 \leq v \leq 1.05$; $0 < t < 1$; and $0 \leq u \leq 1$.~~

2. (Currently amended) A translucent ceramic ~~principally containing a composition according to claim 12~~ represented by the formula $\text{Ba}(\text{Ti}_{x1}\text{M}_{x2}\text{Zn}_y(\text{Ta}_{1-u}\text{Nb}_u)_z)_v\text{O}_w$, wherein ~~M is at least one selected from the group consisting of Sn, Zr, and Hf~~; ~~w is a positive number for maintaining the electrical neutrality; $x1 + x2 + y + z = 1$; $0.01 \leq x1 + x2 \leq 0.60$; $0 < x1 \leq 0.60$; and $0 \leq x2 \leq 0.30$; $1.60 \leq z/y \leq 2.40$; $1.00 \leq v \leq 1.05$; and $0 \leq u \leq 1$.~~

3. (Currently amended) A translucent ceramic ~~principally containing a composition according to claim 12~~ represented by the formula $\text{Ba}(\text{Ti}_{x1}\text{M}_{x2}\text{Mg}_y(\text{Ta}_{1-u}\text{Nb}_u)_z)_v\text{O}_w$, wherein ~~M is at least one selected from the group consisting of Sn, Zr, and Hf~~; ~~w is a positive number for maintaining the electrical neutrality; $x1 + x2 + y + z = 1$; $0.04 \leq x1 + x2 \leq 0.80$; $0 < x1 \leq 0.80$; and $0 \leq x2 \leq 0.40$; $1.60 \leq z/y \leq 2.40$; $1.00 \leq v \leq 1.05$; and $0 \leq u \leq 1$.~~

4. (Canceled)

5. (Currently amended) The translucent ceramic according to Claim ~~[[4]]~~ 12 having a refractive index of 2.01 or more, ~~the linear transmittance being determined using visible light with a wavelength of 633 nm.~~

6. (Currently amended) The translucent ceramic according to ~~any one of Claims 1 to 3~~ Claim 12, having a polycrystalline structure.

7. (Currently amended) A process for producing the translucent ceramic according to ~~any one of Claims 1 to 3~~ Claim 12, comprising:

~~a step of~~ preparing an unfired ceramic body, formed using a mixture of ceramic raw material powders, having a predetermined shape;

~~a step of~~ preparing a co-firing composition having substantially the same composition as that of the mixture of the ceramic raw material powders; and

~~a step of~~ firing the unfired ceramic body in contact with the co-firing composition in an atmosphere with an oxygen content of 90% by volume or more ~~in such a manner that the unfired ceramic body is in contact with the co-firing composition.~~

8. (Original) The process according to Claim 7, wherein the co-firing composition is powder and the firing step is performed in such a manner that the unfired ceramic body is embedded in the co-firing composition.

9. (Original) A translucent ceramic produced by the process according to Claim 7.

10. (Currently amended) An optical component comprising ~~made of~~ the translucent ceramic according to ~~any one of Claims 1 to 3~~ Claim 12.

11. (Original) An optical device including the optical component according to Claim 10.

12. (New) A translucent ceramic comprising a perovskite having a linear transmittance of 20% or more determined using visible light at a wavelength of 633 nm and a sample having a thickness of 0.4 mm, and a composition represented by the

formula $\text{Ba}(\text{Ti}_{x1}\text{M}_{x2}(\text{A})_y(\text{Ta}_{1-u}\text{Nb}_u)_z)_v\text{O}_w$, wherein A is selected from the group consisting of $(\text{Mg}_{1-t}\text{Zn}_t)$, Zn and Mg; M is at least one member selected from the group consisting of Sn, Zr, and Hf; w is a positive number for maintaining the electrical neutrality; $x1 + x2 + y + z = 1$; $0.015 \leq x1 + x2 \leq 0.90$; $0 < x1 \leq 0.90$; $0 \leq x2 \leq 0.60$; y is a positive number; $1.60 \leq z / y \leq 2.40$; $1.00 \leq v \leq 1.05$; $0 < t < 1$; and $0 \leq u \leq 1$.

13. (New) The translucent ceramic according to Claim 1, having a polycrystalline cubic structure, a refractive index in the range of 2.079 to 2.362 and an Abbe number in the range of 13.2 to 29.9.

14. (New) An optical component comprising the translucent ceramic according to Claim 1.

15. (New) An optical device including the optical component according to Claim 14.

16. (New) The translucent ceramic according to Claim 2, having a polycrystalline structure and a refractive index of 2.01 or more.

17. (New) An optical component comprising the translucent ceramic according to Claim 16.

18. (New) An optical device including the optical component according to Claim 17.

19. (New) The translucent ceramic according to Claim 3, having a polycrystalline structure and a refractive index of 2.01 or more.

20. (New) An optical component comprising the translucent ceramic according to Claim 19.

21. (New) An optical device including the optical component according to Claim 20.